DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026119
Date Inspected: 17-Aug-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Steve Mc Connell

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint W-042 location ‘M’, QA randomly observed ABF/JV qualified welder Richard Garcia continuing to perform CJP groove welding repair on the top 165mm to 315mm of the vertical welded ESW due to detected defect from Ultrasonic Testing (UT). The repair was previously excavated using carbon air arc gouging then ground smooth using a die grinder. The excavation was also tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and verified by this QA with affirmative result.

ABF/JV qualified welder Richard Garcia was observed in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The weld repair was preheated to more than 300 degree Fahrenheit using propylene gas torch prior welding. During the shift, ABF QC Steve Mc Connell was noted monitoring the welder. Measured welding parameter during welding was 133 amperes on a 1/8” diameter E7018H4R electrode. Before the end of the shift, welding repair on the opposite side of the ESW excavation was completed and was visually checked by ABF QC Steve Mc Connell and this QA. According to QC, he will wait for 48 hours cooling period and then perform the required MT and UT.

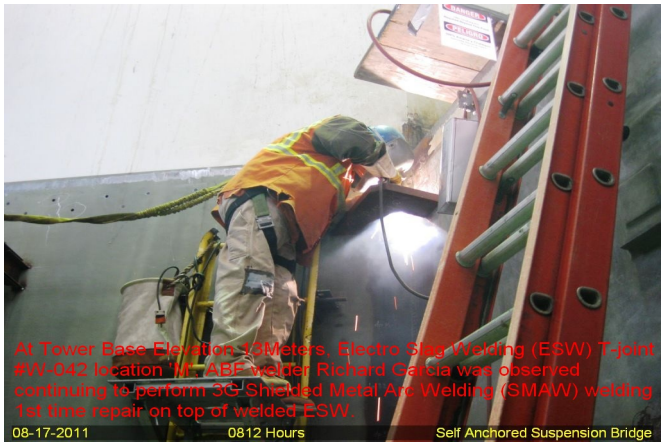
At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint N-041 location ‘N’, QA randomly ABF

welder Jeremy Dolman perform 3G SMAW first time welding repair (R1) on the Ultrasonic Testing (UT) detected defect on the vertical weld of the ESW. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The boat shape repair located at Y=9450mm was excavated to dimensions of 170mm long x 75mm wide x 40mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC John Pagliero and fellow QA Danny Reyes. The repair excavation and the adjacent base metal was preheated to more than 300°F using propylene gas torch prior welding. During the shift, ABF QC Steve Mc Connell was noted monitoring the welder. Measured welding parameter during welding was 130 amperes on a 1/8" diameter E7018H4R electrode. At the end of the shift, 3G repair welding was still continuing and should remain tomorrow.

At Tower Base Elevation 13Meters North shear plate, ABF foreman Rory Hogan informed this QA and ABF QC Steve Mc Connell that the bevel preparation was completed. ABF QC Steve Mc Connell performed a visual test (VT) and measured the bevel angle and depth of the completed bevel prep. Mr. Steve Mc Connell informed this QA that the cut surface of the bevel was smooth, the measured bevel angle was 41 to 43 degree and the depth was 39mm as required. According to QC, the bevel prep was deemed acceptable to contract requirements. This QA performed the verification and noted the same results.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint #E-041 location 'R', ABF welder Richard Garcia was noted excavating the weld cover underfill that was visually noted after the ESW. The welder was using carbon air arc gouging the ESW vertical weld 1450mm from the base plate. During conversation with Caltrans Engineer Doug Wright, this QA had asked whether a Repair Weld Request (RWR) would be necessary since it is an ESW. Mr. Wright told this QA that the RWR will not be required since it is an external visual defect but added that it should be documented.

Still at Tower Base Elevation 13Meters, ABF personnel were able to put in place the outer East diaphragm without any snag. ABF also tried to put the inner East diaphragm and center diaphragm but ABF personnel have noted that the plates were wider than the opening. The diaphragm plates were put back to the barge and ABF intends to cut the edge of the plates by tomorrow.



WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer